

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 1221

Roll No.

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B. Tech.**(Semester-II) Even Semester Theory Examination, 2012-13****BIOLOGY-II***Time : 3 Hours]**[Total Marks : 100**Note : Attempt questions from all Sections as per instructions.***Section-A**Attempt *all* parts of this question. Each part carries 2 marks.

2×10=20

1. (a) Why are villi present in the intestine and not in the stomach ?
- (b) Define vital capacity. What is its significance ?
- (c) What is the importance of plasma proteins ?
- (d) Why do we consider blood as connective tissue ?
- (e) How do you perceive the colour of an object ?
- (f) Which part of the human brain is the most developed ?
- (g) Compare choroid and retina.
- (h) Which hormonal deficiency is responsible for the Goitre ?
- (i) Can we call human evolution as adaptive radiation ?
- (j) Name the primary and secondary lymphoid organs.

Section-BAttempt any *three* parts of this question. Each part carries 10 marks.

10×3=30

2. (a) Describe the digestive role of chymotrypsin. Which two other digestive enzymes of the same category are secreted by its source gland ?
- (b) Describe the role of liver, lungs and skin in excretion.
- (c) Explain mechanism through which a sound produces a nerve impulse in the inner ear.

- (d) What is the mechanism by which the AIDS virus causes deficiency of immune system of the infected person ?
- (e) Microbes can be used to decrease the use of chemical fertilizers and pesticides. Explain, how this can be accomplished.

Section-C

Attempt *all* questions of this Section. Each question carries 10 marks. $10 \times 5 = 50$

3. Discuss the main steps in the digestion of proteins as the food passes through different parts of the alimentary canal.

Or

Explain the process of inspiration under normal conditions. Also explain the major transport mechanism for CO_2 .

4. Describe the evolutionary change in the pattern of heart among the vertebrates.

Or

Draw a standard ECG and explain the different segments in it.

5. Draw and explain the diagrammatic representation of the sectional view of cochlea.

Or

Draw and explain diagrammatic representation of reflex action.

6. Explain, what are the evidences for evolution.

Or

What are the various routes by which transmission of human immunodeficiency virus takes place ?

7. Give examples to prove that microbes release gases during metabolism.

Or

In your view what motivates youngster to take alcohol or drugs and how this be avoided ?